

10/502,073

(FILE 'HOME' ENTERED AT 14:42:52 ON 07 MAR 2007)

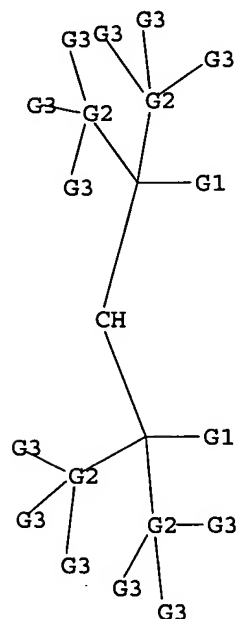
FILE 'REGISTRY' ENTERED AT 14:43:17 ON 07 MAR 2007

L1 STRUCTURE UPLOADED

=> d l1

L1 HAS NO ANSWERS

L1 STR



G1 H, Me, Et, n-Pr, i-Pr, n-Bu, i-Bu, s-Bu, t-Bu, Ph

G2 Si, Ge, Pb, Sn

G3 Cb, Ak

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 14:43:45 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 19162 TO ITERATE

10.4% PROCESSED 2000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 374952 TO 391528  
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 14:43:52 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 380176 TO ITERATE

100.0% PROCESSED 380176 ITERATIONS  
SEARCH TIME: 00.00.05

8 ANSWERS

L3 8 SEA SSS FUL L1

=> fil caplus  
COST IN U.S. DOLLARS  
FULL ESTIMATED COST

SINCE FILE	TOTAL
ENTRY	SESSION
172.10	172.31

FILE 'CAPLUS' ENTERED AT 14:44:02 ON 07 MAR 2007  
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FILE COVERS 1907 - 7 Mar 2007 VOL 146 ISS 11  
FILE LAST UPDATED: 6 Mar 2007 (20070306/ED)

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=> s l3  
L4 5 L3

=> d 1-5 bib abs

L4 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2005:205155 CAPLUS  
DN 142:430407  
TI Reactivity of Silyl-Substituted Allyl Compounds with Group 4, 5, 9, and 10 Metals: Routes to  $\eta^3$ -Allyls, Alkylidenes, and sec-Alkyl Carbocations  
AU Schormann, Mark; Garratt, Shaun; Bochmann, Manfred  
CS Wolfson Materials and Catalysis Centre, School of Chemical Sciences, University of East Anglia, Norwich, NR4 7TJ, UK  
SO Organometallics (2005), 24(7), 1718-1724  
CODEN: ORGND7; ISSN: 0276-7333  
PB American Chemical Society  
DT Journal  
LA English  
OS CASREACT 142:430407  
AB Whereas the reaction of alkali-metal salts of silyl-allyls  $E+[C_3H_3(SiMe_3)_2-1,3]-$  ( $E = Li, K$ ) with Group 4 and Group 5 metal halides gave intractable reduction products,  $Co(acac)_3$  and  $Ni(acac)_2$  reacted with  $K[C_3H_3(SiMe_3)_2-1,3]$  to give  $Co\{\eta^3-C_3H_3(SiMe_3)_2-1,3\}_2$  (1) and  $Ni\{\eta^3-C_3H_3(SiMe_3)_2-1,3\}_2$  (2), resp. The reaction of  $K[C_3H_3(SiMe_3)_2-1,3]$  with  $Me_3SnCl$  afforded  $Me_3SiCH:CHCH(SiMe_3)(SnMe_3)$  (3), which reacted cleanly with  $TaCl_5$  to give  $\{\eta^3-C_3H_3(SiMe_3)_2-1,3\}TaCl_4$  (4). Treatment of this complex with tetramethylethylenediamine led to HCl abstraction, and the allyl complex was transformed into the vinyl-alkylidene compound  $Me_3SiCH:CHC(SiMe_3):TaCl_3(TMEDA)$  (5). Whereas in the case of  $TaCl_5$  dehalostannylation was facile, the reaction of 3 with  $ZrCl_4$  and  $HfCl_4$  took a different course, leading instead to the addition of  $Me_3Sn^+$  to 3 to give  $[HC\{CH(SiMe_3)(SnMe_3)\}_2]+[M_2Cl_9]-$  (6,  $M = Zr$ ; 7,  $M = Hf$ ), the first examples of isolable sec-alkyl carbocations. These salts are surprisingly thermally stable and melt  $>100^\circ C$ ; this stability

is largely due to delocalization of the pos. charge over the two tin atoms. The crystal structures of 1, 2, and 5-7 are reported.

RE.CNT 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:591223 CAPLUS  
DN 139:150077  
TI Process for preparing isobutylene-based polymers  
IN Bochmann, Manfred; Garratt, Shaun; Schormann, Mark  
PA Bayer Inc., Can.  
SO PCT Int. Appl., 26 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003062284	A2	20030731	WO 2003-CA67	20030121
	WO 2003062284	A3	20031002		
	WO 2003062284	A8	20031204		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CA 2368724	A1	20030721	CA 2002-2368724	20020121
	EP 1470167	A2	20041027	EP 2003-700268	20030121
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
	CN 1620470	A	20050525	CN 2003-802539	20030121
	JP 2005515276	T	20050526	JP 2003-562161	20030121
	US 2005165182	A1	20050728	US 2003-502073	20030121
PRAI	CA 2002-2368724	A	20020121		
	WO 2003-CA67	W	20030121		

OS MARPAT 139:150077  
AB This invention relates to a metal organic compound, a catalytic composition comprising said metal organic compound, a process for homo- or co-polymerizing isocolefines in the presence of said metal organic compound and a method of stabilizing a compound of the general structure  $[R'HC(CRR')_2]_2+[M_2X_9]^-$ , in which R = SiR<sub>1</sub>R<sub>2</sub>R<sub>3</sub>, R' = hydrogen, C<sub>1</sub>-12 alkyl, C<sub>6</sub>-14 aryl, or C<sub>7</sub>-20 alkylaryl, M = Zr or Hf, X = halogen, and R<sub>1</sub>-3 C<sub>1</sub>-12 alkyl group, with a compound R' = the formula M'R<sub>4</sub>R<sub>5</sub>R<sub>6</sub>, in which M' = Si, Ge, Sn, or Pb and R<sub>4</sub>-6 = C<sub>1</sub>-12 alkyl group as well as a non-coordinating anion of the general structure  $[M_2X_9]^-$  in which M = Zr or Hf and X = halogen atom.

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:37880 CAPLUS  
DN 138:304368  
TI Synthesis and structures of crystalline bis(trimethylsilyl)methanido complexes of potassium, calcium and ytterbium  
AU Hitchcock, Peter B.; Khvostov, Alexei V.; Lappert, Michael F.  
CS The Chemistry Laboratory, School of Chemistry, Physics and Environmental Science, University of Sussex, Brighton, BN1 9QJ, UK  
SO Journal of Organometallic Chemistry (2002), 663(1-2), 263-268  
CODEN: JORCAI; ISSN: 0022-328X  
PB Elsevier Science B.V.  
DT Journal  
LA English

OS CASREACT 138:304368  
AB Crystalline  $[K(\mu-R)(thf)]_{\infty}$  (1) was obtained from equivalent portions of n-butyllithium in hexane, bis(trimethylsilyl)methane (= RH) and potassium t-butoxide in thf, removal of volatiles and extraction with hexane. Desolvation of 1 in a vacuum led to KR. The first three-coordinate metalate(II) alkyls  $[K(MR_3)]_{\infty}$  [M = Ca (2), M = Yb (3)] of calcium and ytterbium(II) were prepared from the appropriate metal(II) iodide and three equivalent of KR in benzene. Mixing LiR, YbI<sub>2</sub> and two equivalent of KR in a mixture of di-Et ether and small amount of thf yielded the red (like 3)  $[Li(thf)_4][YbR_3]$  (4). Each of 1-4 was obtained in good yield and was characterized by multinuclear NMR spectra in C<sub>6</sub>D<sub>6</sub> and single crystal x-ray diffraction. The central metal is in a trigonal planar 1 or pyramidal 2-4 environment and the average M-C bond lengths are 2.98 (1), 2.50 (2), 2.52 (3 and 4) Å. Crystalline 2 and 3 are isomorphous and consist of double chains of  $[MR_3]^-$  anions linked by K<sup>+</sup> cations along the a axis, whereas complex 4 has an ionic structure with isolated  $[Li(thf)_4]^+$  cation and  $[YbR_3]^-$  anion.  
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2002:655583 CAPLUS  
DN 137:337966  
TI Isolation and Structure of  $[HC\{CH(SiMe_3)(SnMe_3)\}_2]^+$ : A Remarkably Stable sec-Alkyl Cation  
AU Schormann, Mark; Garratt, Shaun; Hughes, David L.; Green, Jennifer C.; Bochmann, Manfred  
CS Wolfson Materials and Catalysis Centre, School of Chemical Sciences, University of East Anglia, Norwich, NR4 7TJ, UK  
SO Journal of the American Chemical Society (2002), 124(38), 11266-11267  
CODEN: JACSAT; ISSN: 0002-7863  
PB American Chemical Society  
DT Journal  
LA English  
OS CASREACT 137:337966  
AB The reaction of the tin-substituted propene  $Me_3Sn(R)CHCH:CHR$  (R = SiMe<sub>3</sub>) with MCl<sub>4</sub> in dichloromethane in the presence of Me<sub>3</sub>SnCl gives the first examples of isolable sec-alkyl carbocation salts,  $[HC(CH(R)SnMe_3)_2]^+M_2Cl_9^-$  (M = Zr, Hf). The compds. are thermally stable and, unlike previously isolated trialkyl carbocations, do not require superacidic media or weakly coordinating anions for stability. The crystal structure and DFT calcs. suggest polarization of the Sn substituents and hyperconjugation as the reason for the unexpected stability. The stabilizing effect of tin is significantly stronger than that of Si. The carbocations are effective initiators for the polymerization of isobutene, isoprene, and α-methylstyrene.  
RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1984:630622 CAPLUS  
DN 101:230622  
TI Chemistry of organosilicon compounds. CXC. An ESR study of conformational transmission in bis(trimethylsilylmethyl)methyl and related radicals  
AU Kira, Mitsuo; Akiyama, Mieko; Sakurai, Hideki  
CS Dep. Chem., Tohoku Univ., Sendai, 980, Japan  
SO Journal of Organometallic Chemistry (1984), 271(1-3), 23-31  
CODEN: JORCAI; ISSN: 0022-328X  
DT Journal  
LA English  
OS CASREACT 101:230622  
AB Static conformations and the dynamic behavior of the radicals  
• $CR(CH_2R_1)_2$  (R = H, Me, OSiMe<sub>3</sub>; R<sub>1</sub> = SiMe<sub>3</sub>, SiMe<sub>2</sub>SiMe<sub>3</sub>, GeMe<sub>3</sub>, SnMe<sub>3</sub>)

have been investigated by ESR. At the preferred conformation, the two R1 groups almost eclipsed the singly-occupied C p orbital and were located on the opposite sides of the CH<sub>2</sub>CRCH<sub>2</sub> plane. The barriers for the flip-flop motion, evaluated by the line-shape anal. of the temperature-dependent ESR spectra, were closely related to those for the R1-group rotation about the C( $\alpha$ )-C( $\beta$ ) bond.

10/502,073

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	16	(556/12).CCLS.	US-PGPUB	OR	OFF	2007/03/07 15:27
L2	4	(556/28).CCLS.	US-PGPUB	OR	OFF	2007/03/07 15:27
L3	437	(502/152).CCLS.	US-PGPUB	OR	OFF	2007/03/07 15:37
L4	517	(526/160).CCLS.	US-PGPUB	OR	OFF	2007/03/07 15:37